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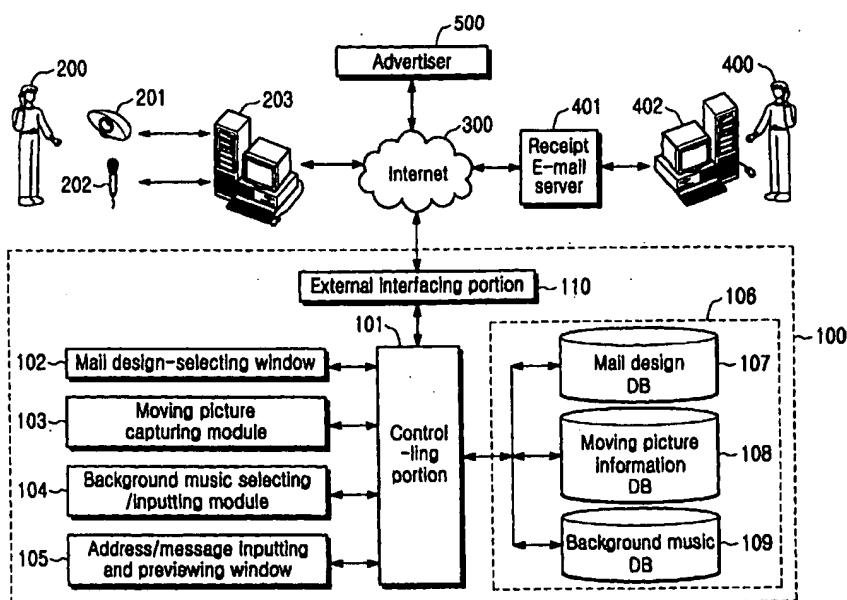
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(54) Title: VIDEO MAIL SERVICE METHOD AND SYSTEM



(57) Abstract: A video mail service method and a system transmit a large amount of E-mail including a moving picture of a person, a voice, image, a character message, etc., at an E-mail address of a receipt client. A moving picture information recorded by a transmission client is stored at a video mail server connected to the receipt client as well as the transmission client and a character message made in a text file only is transmitted to the receipt client to minimize a load when the receipt receives the transmitted E-mail.

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## VIDEO MAIL SERVICE METHOD AND SYSTEM

### Technical Field

The present invention relates to a video mail service method and a system for transmitting a moving picture, voice, an image, a character message, etc., to an E-mail address of a receipt client, and more particularly, to the video mail service and the system in which the moving picture recorded by a transmission client is stored at a video mail server and only the character message made in a text file is transmitted to the receipt client to minimize load at the receipt client when receiving the E-mail and also the video mail server is automatically connected to the receipt client at the point of confirming the character message at the receipt client, whereby the receipt client confirms the moving picture not by a simple client to client method but by a real-time moving picture transmitting method (streaming method).

### Background Art

Recently, due to the spread of an Internet and a private line via an optical cable etc., data transmission speed has been rapidly increased. And according to the improvement of Internet environment due to the development of wireless Internet access technology, the number of Internet user increases by geometrical progression. Particularly, the weight of the Internet in a lift of young generation is very large.

Due to rapid increase in the Internet user, the Internet is used in a general portion of the life as well as for the convenience of a person. In the early 1990s, a letter directly written by the person or a line telephone had been mostly used as a communicating means of the person or a group. However, rapid development of digital communication results in that an E-mail and a mobile phone displaces the letter and the line telephone.

Meanwhile, when a person transmits his/her welfare or desired news through the E-mail, a technology of adding a simple moving picture or music to a text message is used

so as to manufacture a special E-mail expressing his/her own individuality.

Generally, when the person transmits the music, moving picture and an image through the E-mail, the music, moving picture and image are added to a character message made in a text, and then transmitted file in the form of an added file. In this case, the  
5 image and the moving picture should be pictured by a scanning equipment and a camera and then added to the text message. Therefore, the processes inconvenience all of receipt and transmission clients, and also operating time is increased. In addition, since it is necessary for the clients to learn a desired level of technical knowledge in order to perform the above mentioned processes, other person who can not operate a computer can  
10 not perform the above processes.

To solve the problems, there has been provided a method that, after taking the image or moving picture using a PC camera, the image or moving picture was directly synthesized with the text message on a web page, and then the E-mail was transmitted. However, in this case, there is other problem that, if the moving picture, image or music  
15 file to be transmitted has a large capacity, load at the receipt client is increased to receive the high-capacity data, when the receipt client receives the moving picture, image or music file.

### **Disclosure of the Invention**

Therefore, an object of the invention is to resolve the above problem and to  
20 provide a video mail service method and a system which conveniently transmits a video mail through a simple process at a side of a transmission client when transmitting the video mail including high-capacity moving file, and also reduce load at a side of a receipt client when receiving data of the video mail transmitted from the transmission client.

Further, other object of the invention is to provide a differentiated advertising and  
25 marketing means of an enterprise in which an interface of the video mail is diversified so

that a user can select a background image and the mail design in which a product image and a symbol of the enterprise are added, thereby using the video mail as the differentiated advertising and marketing means.

5 To accomplish the object, the present invention provides A service method of transmitting a video mail including a character message, which is comprised of image data, audio data and a text file, on Internet, comprising the steps of confirming whether a video camera and a microphone are disposed at a user's PC by a video mail service system, when a user, who intends to transmit the video mail to a receipt client, connects with the  
10 video mail service system; recording a moving picture and audio, which are respectively output from the user's camera and microphone, through a moving picture capturing module of the video mail service system by the user; selecting a background music from a background music input module of the video mail service system, and inputting the selected background music to the video mail service system by the user; displaying a list  
15 of various kinds of video mail designs from a mail design-selecting module of the video mail service system, and selecting one of the displayed video mail designs by the user; inputting an E-mail address and a character message of the receipt client who receives the video mail, and then transmitting the video mail by the user; transmitting the character message made in the text file out of the video mail, which is stored in the video mail  
20 service system, to an E-mail server corresponding to the E-mail address of the receipt client, and storing the video and audio data of the video mail at a moving picture information database of the video mail service system by the user; connecting with the E-mail server by the receipt client to confirm the character message of the video mail transmitted by the user; hosting the E-mail server of the receipt client to an URL address  
25 of the video mail service system, which is transmitted with the character message to be automatically connected with the video mail service system; and outputting the video and

audio data stored at the moving picture information database by a controlling portion of the video mail service system, and transmitting the data to the E-mail server in real time, and then displaying the moving picture of the video mail written by the user.

In addition, the present invention provides A video mail service system for  
5 transmitting a video mail including a character message, which is comprised of image data, audio data and a text file, on Internet, comprising an external interface portion for compatibly connecting the video mail service system with an Internet network; a moving picture capturing module for receiving a video signal output from a camera disposed at a computer of a user who intends to transmit the video mail to a receipt client, and  
10 converting the video signal into an image, and displaying the image, and capturing the converted image; a background music inputting window in which the user can select a background music to be added to the video mail, and adds the selected background music to the video mail; a mail design selecting window for displaying a list of various kinds of video mail designs previously formed and stored by a video mail service provider who  
15 operates the video mail service system so as for the user to select one of the video mail designs; an address/message inputting and previewing window for inputting an E-mail address of the receipt client and a message and previewing the video mail manufactured by the user; a database portion for storing data input and output to/from the video mail service system; and a controlling portion for controlling an operation of each module  
20 included in the video mail service system, and transmitting an URL of the video mail service system and a character message made in a text file to the E-mail address of the receipt client, when the video mail is transmitted, and storing video and audio data of the video mail manufactured by the user at the database portion of the video mail service system.

25 Preferably, the database portion comprises a mail design database for storing various kinds of video mail design to be provided to the user; a moving picture

information database for storing the video and audio data of the video mail manufactured by the user; and a background music database for storing various kinds of background musics to be added to the video mail which is transmitted by the user.

## 5 Brief Description of the Drawings

The above object, other features and advantages of the present invention will become more apparent by describing the preferred embodiment thereof with reference to the accompanying drawings, in which:

Fig. 1 is a block diagram showing a construction of a mail service system  
10 according to the present invention;

Fig. 2 is a flow chart showing the construction of the mail service system according to the present invention;

Fig. 3 is a view showing an embodiment of a mail design-selecting window;

Fig. 4 is a view showing an embodiment of an address/message inputting and  
15 previewing window; and

Fig. 5 is a flow chart showing an embodiment of an address/message inputting and previewing window.

## Best Mode for Carrying Out the Invention

Now, preferred embodiments of the present invention will be described in detail  
20 with reference to the annexed drawings.

Fig. 1 is a block diagram showing a construction of a mail service system according to the present invention.

As show in Fig. 1, a mail service system 100 is provided with a controlling portion  
25 101. The controlling portion controls an operation of each module 102-110 included in the system 100, and transmits a character message made in a text file to an E-mail server 401

of a receipt client, when a video mail is transferred by a user, and stores a moving picture file at a moving picture information data base 108 in the system 100.

An external interfacing portion 110 has a function of interfacing the video mail service system 100 with a communication network (Internet) 300.

5       A moving picture capturing module 103 receives a video and audio signal output from a PC camera 201 and a microphone 202 which are disposed at a user's computer 203. The video signal is converted into an image to be displayed. The converted image is captured and displayed through a video mail to a user 200 as a moving picture to be transmitted. Also, the moving picture capturing module 103 provides an option of a  
10      capturing time, a frame time and a sampling rate, etc., to be selected by the user.

A mail design-selecting window 102 has a function of displaying a list of various kinds of video mail designs which are previously defined by a video mail service provider so that the user 200 can select the desired video mail.

15       A background music selecting/inputting module 104 provides a list of various background musics stored at a background music database 109 so that the user 200 can select one of the background musics and add the selected music to the video mail.

An address/message inputting and previewing window 105 provides a function of inputting an E-mail address of a receipt client 400 and a message by the user 200 and previewing the video mail written by the user 200.

20       A database portion 106 stores data input or output to/from the video mail service system 100, and includes a mail design database 107 for storing the various kinds of mail designs to be provided to the user 200, a moving picture information database 108 for storing the moving picture to be output as the video mail when the user transmits the video mail to the receipt client and the background music database 109 for storing multiple  
25      background musics which are added to the video mail to be transmitted.

Fig. 2 is a flow chart showing the construction of the mail service system according to the present invention.

In order to transmit the mail including a multi-media such as the moving picture, the music and the image, etc. to the receipt client, the user firstly connects through the communication network (Internet) 300 to the video mail service system 100 (step:S1). At this time, the video mail system 100 checks whether the video camera 201 and the microphone 202 are disposed at the user's computer 203, and informs the user whether the video mail service can be used (step:S2).

If the camera 201 and the microphone 202 are disposed at the user's computer and the video mail service can be used by the user, the user takes the moving picture to be transmitted with the video mail using the moving picture capturing module 103 of the video mail service system 100 (step:S3).

At this time, the moving picture capturing module 103 is provided with a moving picture displaying box for displaying the moving picture formed by the user 200 and option keys for setting the sampling rate, the frame time and the capturing time of the moving picture recorded by the user.

In the moving picture displaying box, the video signal of the camera (PC camera) 201 disposed at the user's computer 203 is transmitted through the communication network and converted into the moving picture. The user operates the option keys according to performance of the user's computer 203, and performs a video and audio recording operation while viewing the image displayed in the moving picture displaying box.

Then, if the user 200 wants to add the background music to his/her own mail, the user selects the background music selecting/inputting module 104. The various background musics stored at the background music database 109 by the mail service provider is listed by each kind and displayed in the background music selecting/inputting

module 104. The user 200 selects the music fitted with the atmosphere of his/her own mail (step:S4).

If the user would like to add a certain music that is not provided in the video mail service system 100, the user 200 can add the certain music to the mail using his/her own music file. Meanwhile, if the user 200 would not like to add the background music to the mail, the user 200 can omit the music selecting operation.

And then, the mail design-selecting window 102 is displayed.

Fig. 3 is a view showing an embodiment of the mail design-selecting window 102.

As shown in Fig. 3, the mail design selecting window 102 displays a list of various kinds of video mail designs provided by the video mail service provider so that the user 200 can select one of the video mail designs (step:S5).

If the background music selecting/inputting operation and the mail design selecting operation are completed, the video mail service system 100 displays the address/message inputting and previewing window 105.

Fig. 4 is a view showing an embodiment of an address/message inputting and previewing window.

As shown in Fig. 4, the address/message inputting and previewing window 105 displays an input portion for inputting an E-mail address of the transmission client (user) 200 and the receipt client 400, a mail title and a message, and a previewing window 105 for reproducing the video mail recorded by the user. The user 200 inputs the E-mail address of the receipt client 400 in the E-mail input window of the address/message inputting and previewing window 105 (step:S6) and the message to be transmitted to the receipt client (step:S7). The user 200 may select the plurality of receipt clients.

If the user would like to preview the video mail, the user 200 can perform a previewing function (step:S8). However, if the user would not like to perform the function, the video mail is transmitted to the receipt client.

At this time, the controlling portion 101 of the video mail service system 100 transmits the text file out of data files of the video mail written by the user 200 to an E-mail server 401 of the receipt client, which is input in the video mail, and stores video and audio data having large capacity such as the moving picture and the background music at 5 the moving picture information database 108 of the database portion 106 (step:S9). The text file is an URL of the mail service system 100 to be capable of accessing to the character message, and the video and audio data.

Meanwhile, the user 200 can store the video mail transmitted to the receipt client at a local computer (for example, the user's PC) and then re-transmit the video mail to 10 other clients.

Fig. 5 is a flow chart showing an embodiment of the address/message inputting and previewing window.

The receipt client 400 connects to a POP3 type or web mail type E-mail server 401 to confirm the video mail (step:S10).

15 Then, the receipt client 400 confirms the fact that a new video mail is received in his/her mail box, and opens the new video mail (step:S11).

When the receipt client 400 opens the video mail, the message input by the user 200 is displayed (step:S12). At this time, the receipt client is hosted on an URL address of the video mail service system 100 transmitted with the text message from the video mail 20 service system to be connected to the video mail system 100 (step:S13).

The controlling portion 101 of the video mail service system 100 outputs the video data such as the moving picture and image of the user 100 and the audio data such as the musics stored at the moving picture information database 108, and then displays the moving picture through the receipt client's E-mail server 401 at a receipt client's computer 25 402 in real time by a streaming method (step:S14).

Here, the streaming method is a technology that continuously processes data

transmitted through the communication network (Internet) 300 like the flow of water. Particularly, since it is very difficult to secure a connection line as fast as mass multimedia can be promptly downloaded, the technology allows a client browser or plug-in to express the data even before all files are transmitted. (For example, a real audio performing 5 technology is a kind of the streaming method).

The receipt client 400 confirms the video mail transmitted by the user by the real time moving picture transmitting method (step:S15). The video mail opened by the receipt client is automatically stored at the receipt client's computer (step:S16).

Meanwhile, an advertisement (a product image, a logo, and a symbol, etc.) of a 10 company or an advertising enterprise, which is contracted to the video mail service provider, may be added to the video mail transmitted by the user 200. Therefore, the video mail service system 100 may be used as a differentiated advertising and marketing means of the enterprise.

Preferably, after the video mail service provider makes a desired advertising 15 contract with the enterprise or a user in the enterprise, the provider manufactures the video mail design for advertising the enterprise and a new product of the enterprise so that the user at the enterprise can selects the video mail design through the mail design-selecting window 102.

According to the advertising video mail, the user or the enterprise achieves an 20 extraordinary advertising effect by only transmitting and receiving of the video mail having the video mail design agreed with the enterprise.

While the present invention has been described herein with reference to particular embodiments thereof, a latitude of modification, various changes and 25 substitutions are intended in the foregoing disclosure, and in some instances some features of the invention will be employed without a corresponding use of other

features without departing from the scope of the invention as set forth.

### **Industrial Applicability**

As described above, in the E-mail transmission through the Internet according to the present invention, the user can transmit and receive the moving picture as well as the character message. Particularly, when transmitting a mass E-mail including the moving picture and the music, etc., the high-capacity file such as the moving picture file or the music file is stored at the video mail server system connected with the clients, and only the text file is transmitted and received between the receipt client and the transmission client, thereby reducing the load at the receipt client.

Further, the interface of the video mail is diversified so that the user can select a background image and the mail design in which a product image and a symbol of the enterprise are added. Therefore, there is an advantage that the user can use the video mail as a differentiated advertising and marketing means.

**Claims**

1. A service method of transmitting a video mail including a character message, which is comprised of image data, audio data and a text file, on Internet, comprising the steps of:

5 confirming whether a video camera and a microphone are disposed at a user's PC by a video mail service system, when a user, who intends to transmit the video mail to a receipt client, connects with the video mail service system;

recording a moving picture and audio, which are respectively output from the user's camera and microphone, through a moving picture capturing module of the video  
10 mail service system by the user;

selecting a background music from a background music input module of the video mail service system, and inputting the selected background music to the video mail service system by the user;

displaying a list of various kinds of video mail designs from a mail design-  
15 selecting module of the video mail service system, and selecting one of the displayed video mail designs by the user;

inputting an E-mail address and a character message of the receipt client who receives the video mail, and then transmitting the video mail by the user;

transmitting the character message made in the text file out of the video mail,  
20 which is stored in the video mail service system, to an E-mail server corresponding to the E-mail address of the receipt client, and storing the video and audio data of the video mail at a moving picture information database of the video mail service system by the user;

connecting with the E-mail server by the receipt client to confirm the character message of the video mail transmitted by the user;

25 hosting the E-mail server of the receipt client to an URL address of the video

mail service system, which is transmitted with the character message to be automatically connected with the video mail service system; and

outputting the video and audio data stored at the moving picture information database by a controlling portion of the video mail service system, and transmitting the

5 data to the E-mail server in real time, and then displaying the moving picture of the video mail written by the user.

2. The method according to claim 1, wherein the video mail service system adds an advertisement of a company and an advertising enterprise, which are contracted to a video mail service provider, to the video mail design, and displays the advertisement with 10 the video mail, when the user transmits the video mail to the E-mail server of the receipt client and displays in real time.

3. The method according to claim 2, wherein the advertisement, which is added to the video mail design and displayed, is a logo, a product image, a blurb, a symbol, a banner and a moving picture of the company and the advertising enterprises contracted to 15 the video mail service provider.

4. The method according to claim 1 or 2, wherein the video mail service system provides an advertising video mail agreed with an image of the company and the advertising enterprise contracted to the video mail service provider through the mail design-selecting module so that the user can select the mail design of the video mail when 20 transmitting the video mail to the receipt client.

5. A video mail service system for transmitting a video mail including a character message, which is comprised of image data, audio data and a text file, on Internet, comprising:

an external interface portion for compatibly connecting the video mail service system with an Internet network;

a moving picture capturing module for receiving a video signal output from a camera disposed at a computer of a user who intends to transmit the video mail to a receipt client, and converting the video signal into an image, and displaying the image, and capturing the converted image;

a background music inputting window in which the user can select a background music to be added to the video mail, and adds the selected background music to the video mail;

10 a mail design selecting window for displaying a list of various kinds of video mail designs previously formed and stored by a video mail service provider who operates the video mail service system so as for the user to select one of the video mail designs;

an address/message inputting and previewing window for inputting an E-mail address of the receipt client and a message and previewing the video mail manufactured 15 by the user;

a database portion for storing data input and output to/from the video mail service system; and

a controlling portion for controlling an operation of each module included in the video mail service system, and transmitting an URL of the video mail service system and 20 a character message made in a text file to the E-mail address of the receipt client, when the video mail is transmitted, and storing video and audio data of the video mail manufactured by the user at the database portion of the video mail service system.

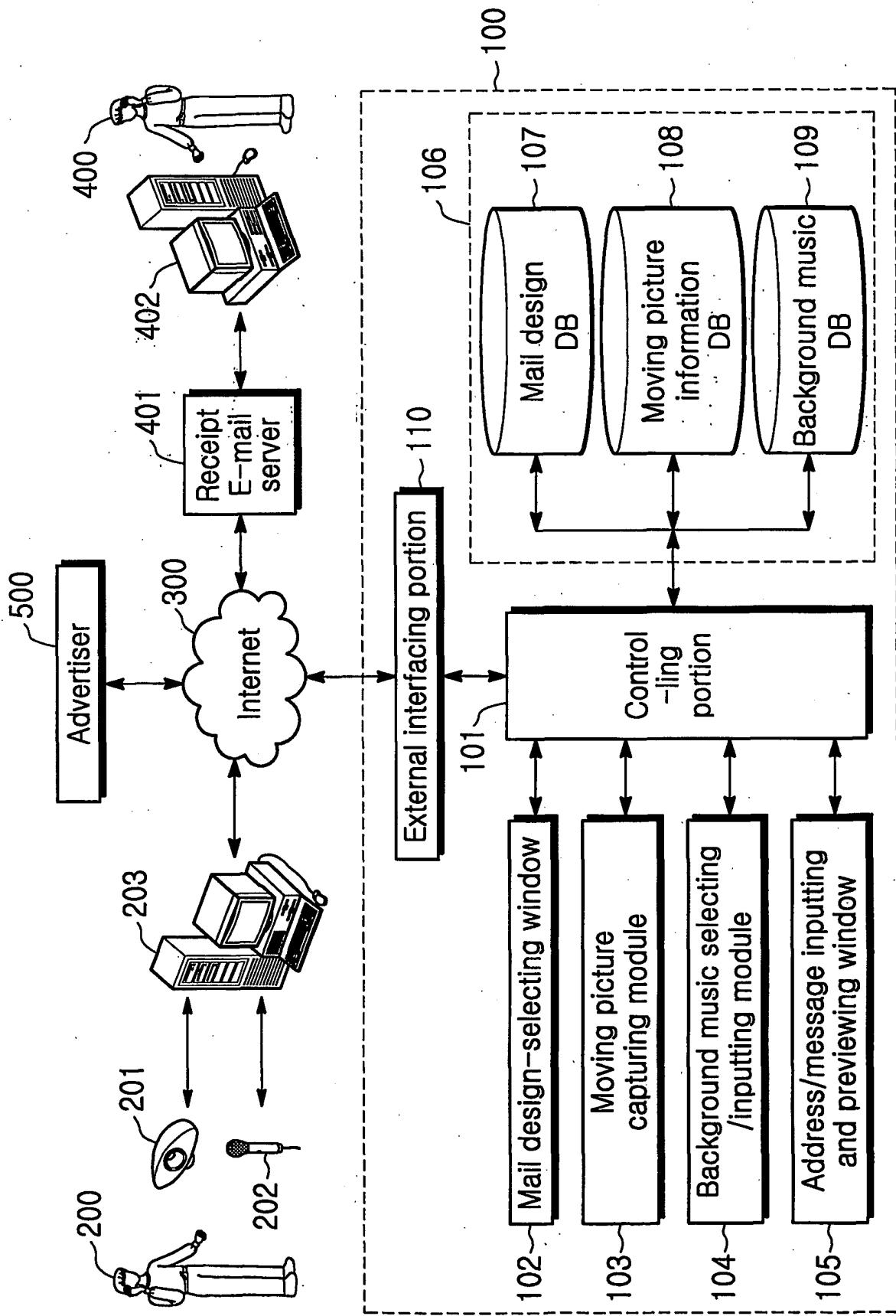
6. The system according to claim 1, wherein the database portion comprises:

25 a mail design database for storing various kinds of video mail design to be provided to the user;

a moving picture information database for storing the video and audio data of the video mail manufactured by the user; and

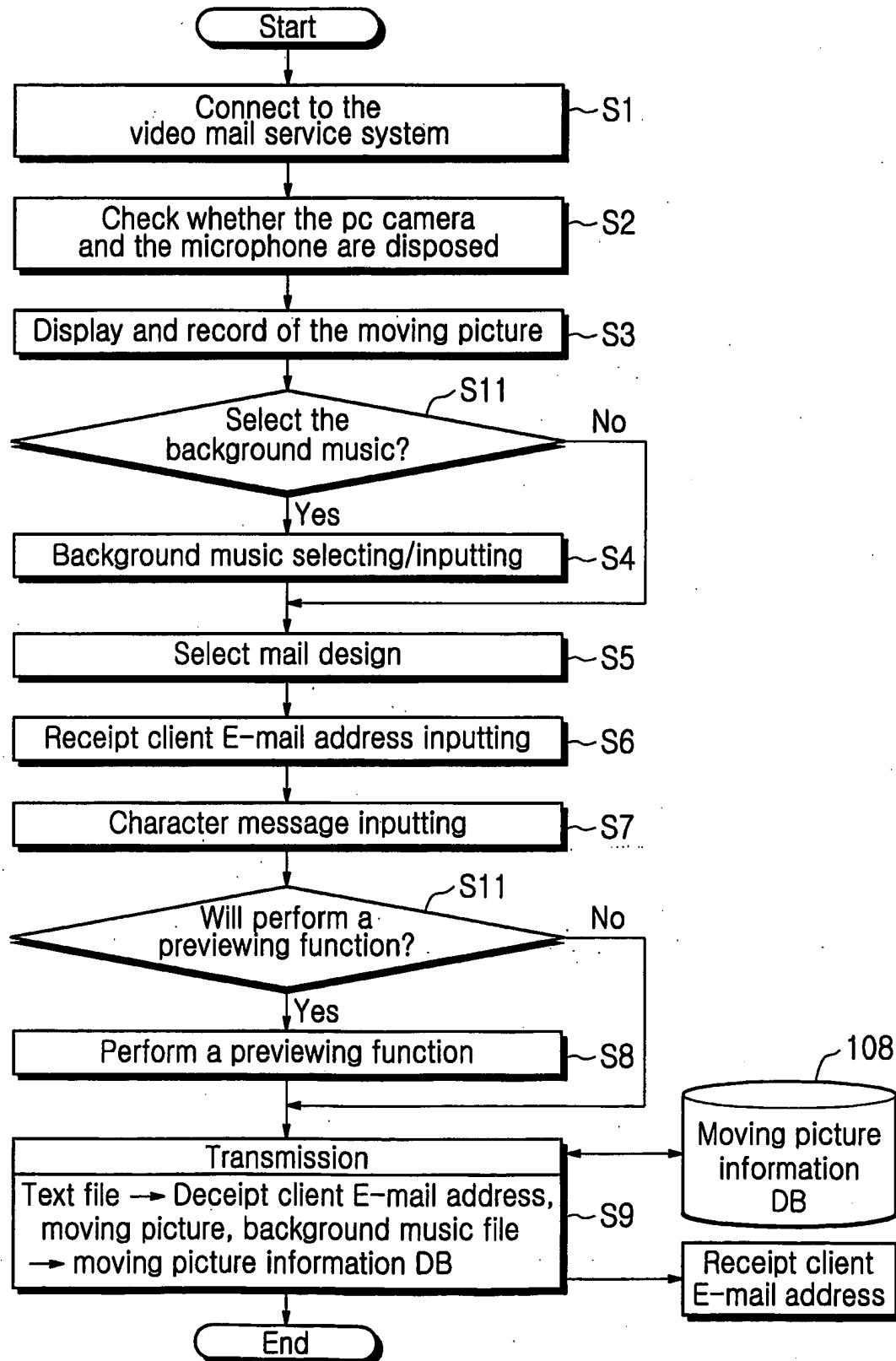
a background music database for storing various kinds of background musics to be added to the video mail which is transmitted by the user.

FIG. 1



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FIG. 2



3  
FIG.

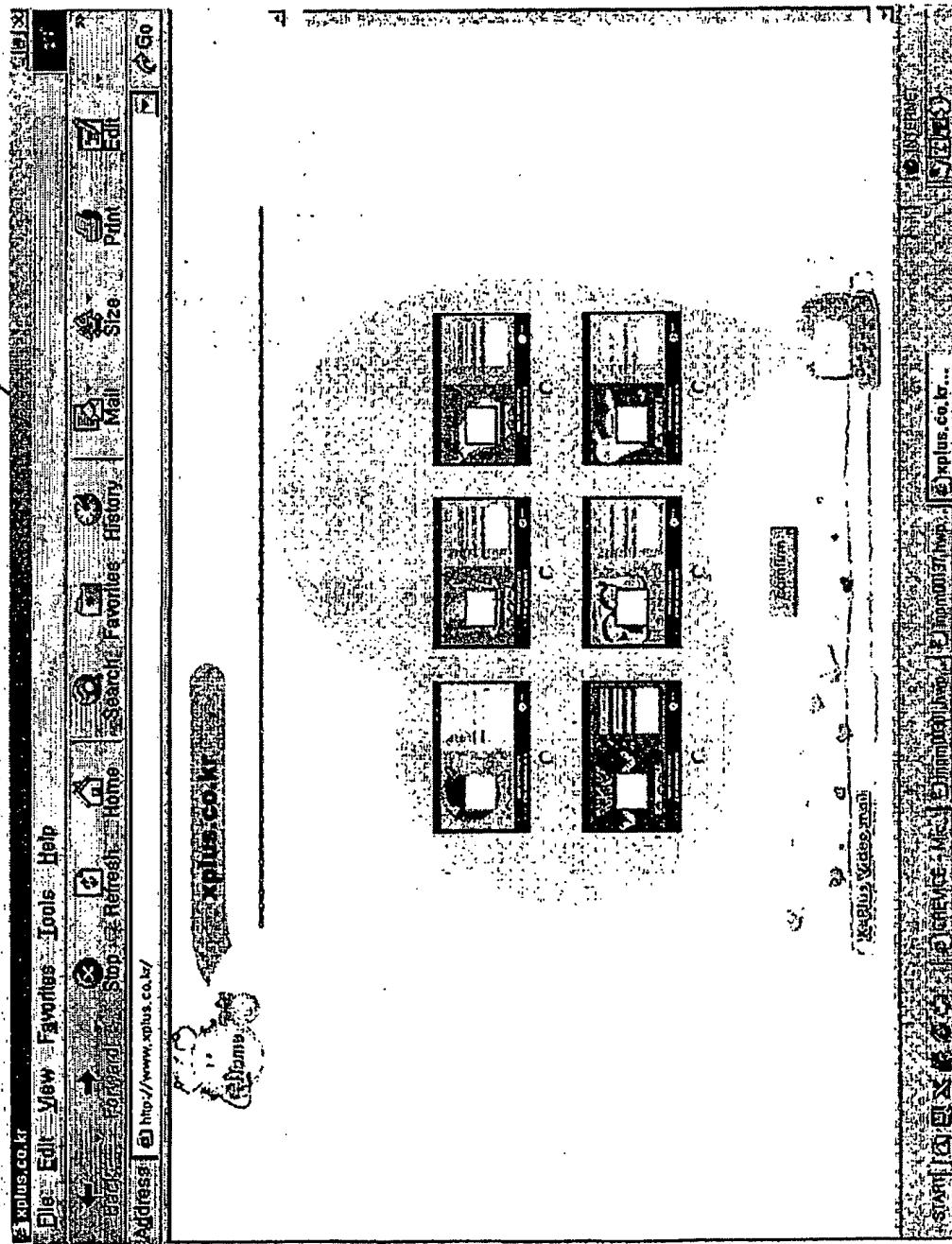
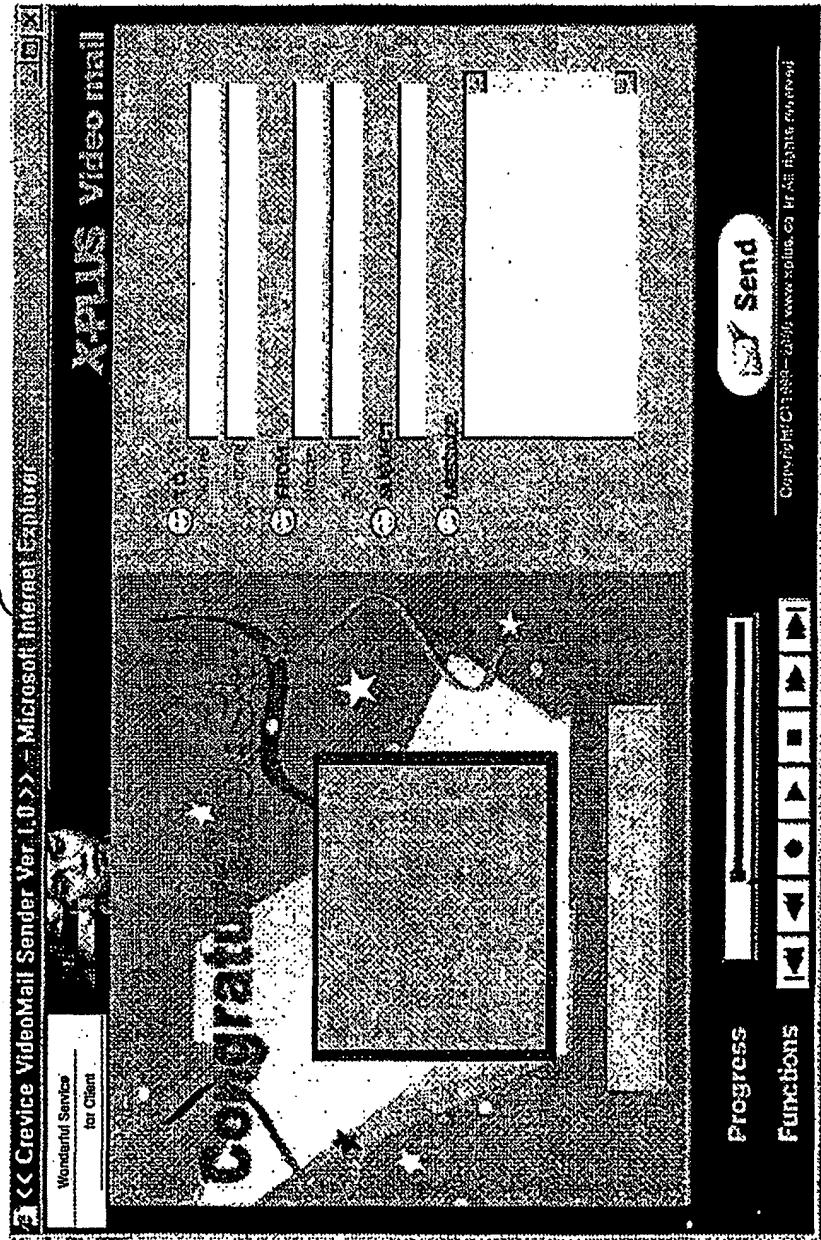


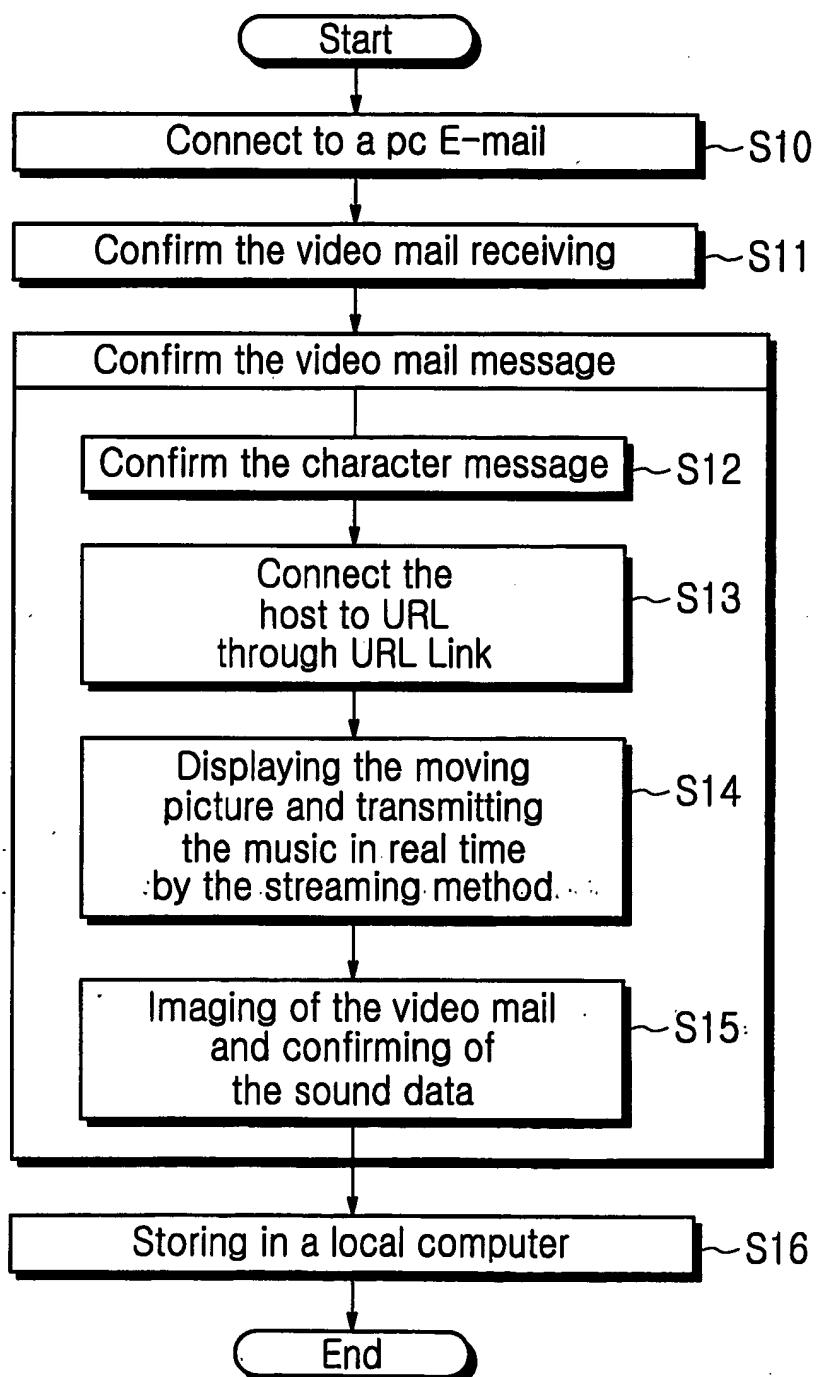
FIG. 4

105



5/5

## FIG. 5



**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/KR01/00397

**A. CLASSIFICATION OF SUBJECT MATTER**

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According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimun documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimun documentation to the extent that such documents are included in the fields searched

Korean patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the interntional search (name of data base and, where practicable, search terms used)

WPI, PAJ, IEEE/IEE Electronic Library(Since 1988) "video", "mail", "multimedia", "electronic mail"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 2000-37392 A (JUN-SUK, SONG) 5 JULY 2000 see the whole document	1-6
Y	KR 2000-36353 A (KYUNG-BUM, YOU) 5 JULY 2000 see the whole document	1-6
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A	US 6,014,689 A (Smith Micro Software Inc.) 11 JAN 2000 see the whole document	1-6

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